IN THE UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

TRADING TECHNOLOGIES INTERNATIONAL, INC.,	)	
Plaintiff	)	No. 10 C 715
v.	)	Judge Virginia M. Kendall
IBG, LLC, et al.	)	
Defendants.	)	

MEMORANDUM OPINION AND ORDER

Plaintiff Trading Technologies ("TT") brought this action to recover damages caused by Defendant IBG's alleged infringement of four TT patents: the '132, '304, '411, and '996 Patents. Before the Court are the parties' cross motions for summary judgment regarding patent eligibility. TT moves for summary judgment that the patents in suit are patent eligible as a matter of law [1359]. IBG moves for summary judgment that the '411 and '996 Patents are patent ineligible [1387]. For the following reasons, TT's motion is granted in part and denied in part and IBG's motion is granted.

BACKGROUND

I. Patent Claims

The patents at issue are part of the same patent family, share a common patent specification, and are "directed to the electronic trading of commodities." (Dkt. 1119 at Ex. C) (Dkt. 1120 at Ex. Q, Ex. S, Ex. U). [1] They recite "[a] method and system for reducing the time it takes for a trader

[1] While the Court would normally rely on the parties' Rule 56.1 Statements of Material Fact on a motion for summary judgment, the Court declines to heavily rely on them in this matter—quite simply they are not useful. Nearly every statement is disputed without regard to whether the basis for dispute affects the outcome of the present motions. Instead, the Court relies on the underlying evidence itself to glean the material facts.

to place a trade when electronically trading on an exchange, thus increasing the likelihood that the trader will have orders filled at desirable prices and quantities." (*Id.*) Specifically, the patents claim a graphical user interface ("GUI") "displaying market depth on a vertical or horizontal plane, which fluctuates logically up or down, left or right across the plane as the market price fluctuates" and "a static display of prices corresponding to the plurality of bids and asks." (*Id.*) The "pluralities of bids and asks are dynamically displayed in alignment with the prices corresponding thereto." (*Id*). "This allows the trader to trade quickly and efficiently." (*Id.*) The invention disclosed by the patents "can be implemented on any existing or future terminal or device" and "[t]he physical mapping of [the] information to a screen grid can be done by any technique known to those skilled in the art. " (*Id.*) ("The invention is not limited by the method used to map the data to the screen display.").

The patents in suit disclose the following prior art GUI display:

FIG. 2

	201 Contract	202 Depth	203 BidQty	204 BidPrc	205 AskPrc	AskQty	LastPrc	LastQty	Total
1	CDHO	•	785	7626	7627	21	7627	489	8230
2			626	7625	7629	815			
3			500	7624	7630	600			
4			500	7623	7631	2456			
5			200	7622	7632	800			

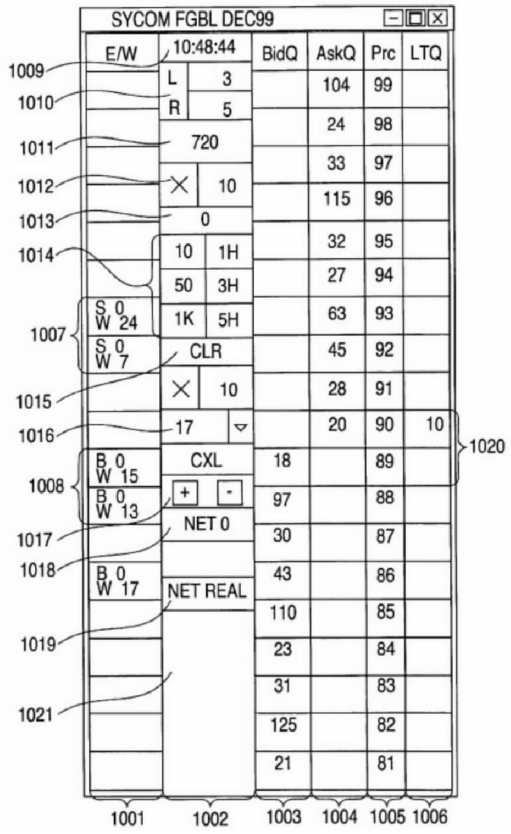
(Dkt. 1119 at Ex. C) (Dkt. 1120 at Ex. Q, Ex. S, Ex. U). The grid depicts the inside market (highest ask and bid prices) and the market depth of a given commodity being traded. (*Id.*)

(*Id.*) On a conventional trading screen like Figure 2, the fluctuation of market prices "results in rapid changes in the price and quantity fields within the market grid[,]" which creates a problem: "If a trader intends to enter an order at a particular price, but misses the price because the market

prices moved before he could enter the order, he may lose hundreds, thousands, even millions of dollars." (*Id.*)

In contrast, the disclosed invention, as illustrated by Figure 3 below, displays bid and ask columns and inside market indicators (area 1020) that move relative to a static price axis, "increas[ing] the speed of trading and the likelihood of entering orders at desired prices with desired quantities." (*Id.*)

FIG. 3



Despite the common specification language, the reference to "a static display of prices" denotes a slightly different scope with regards to the '132 and '304 Patents than to the '411 and '996 Patents. The '132 and '304 Patents recite a GUI with a static axis displaying prices that does not move when the inside market changes, unless by a manual re-centering or re-positioning command. (Dkt. 1119 at Ex. C) (Dkt. 1120 at Ex. Q) (Dkt. 1448 at ¶ 23). On the other hand, the

'411 and '996 Patents encompass, but do not require, GUI's with price axes that automatically recenter. (Dkt. 1527 at ¶¶ 14–15).

Representative claim one of the '411 Patent recites:

> A method of displaying market information relating to and facilitating trading of a commodity being traded on an electronic exchange, the method comprising:
>
> receiving, by a computing device, market information for a commodity from an electronic exchange, the market information comprising an inside market with a current highest bid price and a current lowest ask price;
>
> displaying, via the computing device, a bid display region comprising a plurality of graphical locations, each graphical location in the bid display region corresponding to a different price level of a plurality of price levels along a price axis;
>
> displaying, via the computing device, an ask display region comprising a plurality of graphical locations, each graphical location in the ask display region corresponding to a different price level of the plurality of price levels along the price axis;
>
> dynamically displaying, via the computing device, a first indicator representing quantity associated with at least one trade order to buy the commodity at the current highest bid price in a first graphical location of the plurality of graphical locations in the bid display region, the first graphical location in the bid display region corresponding to a price level associated with the current highest bid price;
>
> upon receipt of market information comprising a new highest bid price, moving the first indicator relative to the price axis to a second graphical location of the plurality of graphical locations in the bid display region, the second graphical location corresponding to a price level of the plurality of price levels associated with the new highest bid price, wherein the second graphical location is different from the first graphical location in the bid display region;
>
> dynamically displaying, via the computing device, a second indicator representing quantity associated with at least one trade order to sell the commodity at the current lowest ask price in a first graphical location of the plurality of graphical locations in the ask display region, the first graphical location in the ask display region corresponding to a price level associated with the current lowest ask price;
>
> upon receipt of market information comprising a new lowest ask price, moving the second indicator relative to the price axis to a second graphical location of the plurality of graphical locations in the ask display region, the second graphical location corresponding to a price level of the plurality of price levels associated with the new lowest ask price, wherein the second graphical location is different

from the first graphical location in the ask display region;

displaying, via the computing device, an order entry region comprising a plurality of graphical areas for receiving single action commands to set trade order prices and send trade orders, each graphical area corresponding to a different price level along the price axis;

and selecting a particular graphical area in the order entry region through a single action of the user input device to both set a price for the trade order and send the trade order having a default quantity to the electronic exchange.

(Dkt. 1120 at Ex. S).

Representative claim 1 of the '996 Patent recites:

A computer readable medium having program code recorded thereon for execution on a computer having a graphical user interface and a user input device, the program code causing a machine to perform the following method steps:

receiving market information for a commodity from an electronic exchange, the market information comprising an inside market with a current highest bid price and a current lowest ask price;

receiving an input from a user that designates a default quantity to be used for a plurality of trade orders;

dynamically displaying a first indicator in one of a plurality of locations in a bid display region, each location in the bid display region corresponding to a price level along a static price axis, the first indicator representing quantity associated with at least one order to buy the commodity at the current highest bid price;

dynamically displaying a second indicator in one of a plurality of locations in an ask display region, each location in the ask display region corresponding to a price level along the static price axis, the second indicator representing quantity associated with at least one order to sell the commodity at the current lowest ask price;

displaying the bid and ask display regions in relation to a plurality of price levels arranged along the static price axis such that when the inside market changes, the price levels along the static price axis do not change positions and at least one of the first and second indicators moves in the bid or ask display regions relative to the static price axis;

displaying an order entry region aligned with the static price axis comprising a plurality of areas for receiving commands from the user input device to send trade orders, each area corresponding to a price level of the static price axis;

> and receiving a plurality of commands from a user, each command sending a trade order
> to the electronic exchange, each trade order having an order quantity based on the default quantity without the user designating the default quantity between commands, wherein each command results from selecting a particular area in the order entry region corresponding to a desired price level as part of a single action of the user input device with a pointer of the user input device positioned over the particular area to both set an order price parameter for the trade order based on the desired price level and send the trade order to the electronic exchange.

(*Id*. at Ex. U).

II. IBG's Prior Art Evidence

Prior to the patents in suit, specialists at the New York Stock Exchange ("NYSE") maintained physical books with pre-printed vertical price columns and used them to plot, by hand, bid and ask quantities along the price column. (Dkt. 1527 at ¶ 33). By 1992, the NYSE implemented an electronic version of the specialist's book called the "Display Book." (*Id*. at ¶ 34). Another exchange, INTEX, also implemented a GUI modeling the specialist's book. (*Id*. at ¶ 35). Pen-and-paper books, similar to the specialist's book, were also used at the Tokyo Stock Exchange, which were then converted to an electronic version. (*Id*. at ¶¶ 37–38).

LEGAL STANDARD

Summary judgment is proper when "the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a); *see, e.g.*, *Reed v. Columbia St. Mary's Hosp.*, 915 F.3d 473, 485 (7th Cir. 2019). The parties genuinely dispute a material fact when "the evidence is such that a reasonable jury could return a verdict for the nonmoving party." *Daugherty v. Page*, 906 F.3d 606, 609–10 (7th Cir. 2018) (citing *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986)). In determining whether a genuine issue of material fact exists, the Court draws all reasonable inferences in favor of the party

opposing the motion. *Anderson*, 477 U.S. at 255; *Zander v. Orlich*, 907 F.3d 956, 959 (7th Cir. 2018).

DISCUSSION

Whether a concept is patent eligible is a question of law. *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018). Under 35 U.S.C. § 101, "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof," is eligible for a patent on that invention. "[L]aws of nature, physical phenomena, and abstract ideas," however, are patent ineligible concepts. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014) (internal quotations and citation omitted). *Alice* articulates a two-step process to determine whether a claimed invention is patent eligible. *Id*. at 217. First, the Court must "determine whether the claims at issue are directed to a patent-ineligible concept." *Id*. at 218. A finding of patent eligibility at step one ends the inquiry. *See e.g., Enfish, LLC v. Microsoft Corp*., 822 F.3d 1327, 1339 (Fed. Cir. 2016). In the context of computer programs, claims that improve the way a computer operates or solve a technological problem are patent eligible, but claims that merely use a computer to implement well-known business or economic practices are not. *Id*. "[I]mproving a user's experience while using a computer application is not, without more, sufficient to render the claims directed to an improvement in computer functionality." *Customedia Techs., LLC v. Dish Network Corp.*, 951 F.3d 1359, 1365 (Fed. Cir. 2020).

If the claims involve a patent-ineligible concept, the Court must then "consider the elements of each claim both individually and as an ordered combination to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application." *Alice*, 573 U.S. at 217 (internal quotations and citation omitted). At this step, the Court must "search for

an inventive concept —*i.e.*, an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself." *Id*. at 217–18 (internal quotations and citation omitted). The party challenging the validity of a patent—in this case, IBG—bears the burden of establishing invalidity, including patent ineligibility, by clear and convincing evidence. *See* 35 U.S.C § 3582 (establishing a rebuttable presumption of patent validity and placing the burden of establishing invalidity on the party asserting invalidity).

I. The '132 and '304 Patents

The Federal Circuit has already held that the '132 and '304 Patents are eligible under 35 U.S.C. § 101. *Trading Techs. Int'l, Inc. v. CQG, Inc.,* 675 F. App'x 1001, 1002 (Fed. Cir. 2017). In *CQG* the court observed that the '132 and '304 Patents "do not simply claim displaying information on a graphical user interface[,]" but are directed to "resolv[ing] a specifically identified problem in the prior state of the art[,]" namely, "that the best bid and best ask prices would change based on updates received from the market." *Id*. at 1004; *Trading Techs. Int'l, Inc. v. CQG, Inc.*, No. 05-CV-4811, 2015 WL 774655, at *4 (N.D. Ill. Feb. 24, 2015), *aff'd*, 675 F. App'x 1001 (Fed. Cir. 2017). As the district court explained:

> There was a risk with the prior art GUIs that a trader would miss her intended price as a result of prices changing from under her pointer at the time she clicked on the price cell on the GUI. The patents-in-suit provide a system and method whereby traders may place orders at a particular, identified price level, not necessarily the highest bid or the lowest ask price because the invention keeps the prices static in position, and allows the quantities at each price to change.

CQG, 2015 WL 774655, at *4. Thus, the court concluded, the '132 and '304 Patents were patent eligible under *Alice* step one and not directed to an abstract idea. *CQG*, 675 F. App'x at 1004.

IBG argues *CQG* does not compel a finding of eligibility in this case because it is a nonprecedential opinion and involved a different set of facts than those before this Court. First,

the Court may (and should) rely on nonprecedential opinions interpreting the same patent to ensure the uniform treatment of that patent. *See e.g., Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334, 1337 (Fed. Cir. 1999). With respect to the '132 and '304 patents, the Court has no qualms in relying on *CQG* which involved the same legal question (§ 101 eligibility) and the same patents.

Regarding the distinct factual record in *CQG*, IBG claims an independent *Alice* inquiry is required because the *CQG* court did not consider the evidence of prior art before this Court. Step one of the *Alice* framework, however, "does not require an evaluation of the prior art or facts outside of the intrinsic record regarding the state of the art at the time of the invention." *CardioNet, LLC v. InfoBionic, Inc*, 955 F.3d 1358, 1374 (Fed. Cir. 2020), *cert. denied sub nom. InfoBionic, Inc. v. Cardionet, LLC*, 141 S. Ct. 1266 (2021). Although *CQG* court did not have evidence of every alleged prior art reference IBG presents, it did have some evidence of "prior art GUI's that showed market dept and the inside market in a table or grid," including the INTEX system. (Dkt. 1527-4). More importantly, the court considered the intrinsic evidence of prior art disclosed by the patents themselves in Figure 2. While the *CQG* court found it relevant that the '132 and '304 Patents had "no pre-electronic trading analog" and were "not an idea that has long existed," *CQG*, 675 F. App'x at 1004, more evidence regarding prior art does not compel a different conclusion as to eligibility: "[t]he analysis under *Alice* step one is whether the claims as a whole are directed to an abstract idea, *regardless of* whether the prior art demonstrates that the idea or other aspects of the claim are known, unknown, conventional, unconventional, routine, or not routine." *CardioNet*, 955 F.3d at 1372 (internal quotations and citation omitted) (emphasis added). The Court sees no reason to disrupt the Federal Circuit's holding regarding the eligibility of the '132 and '304 Patents

based solely on the prior art evidence presented by IBG. TT's motion for summary judgment is granted as to the '132 and '304 Patents.

II. The '411 and '996 Patents

A. *Alice* Step One: Abstract Idea

The issue of patent eligibility with respect to the '411 and '996 Patents is one of first impression. IBG argues the '411 and '996 Patents are directed to the unpatentable abstract idea "of placing an order based on observed, dynamically updated market information" rather than to an improvement in computer technology. (Dkt. 1387 at 10). TT asserts the '411 and '996 Patents are directed to technological improvements in speed, accuracy, and usability. (Dkt. 13 at 7).

The representative claims of the '411 and '911 patents respectively claim "[a] method of displaying market information relating to and facilitating trading of a commodity being traded on an electronic exchange" and "[a] computer readable medium having program code recorded thereon for execution on a computer having a graphical user interface and a user input device," that recite steps of receiving market information for a commodity from an electronic exchange and displaying such information in a dynamic way. (Dkt. 1120 at Ex. S, Ex. U). The mere process of gathering information and displaying the results, however, is unpatentable. *See e.g., Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016). While TT claims the asserted invention improves the speed, accuracy, and usability of trading GUIs, it is clear that the goal of providing market information in the specific configuration recited by the patents is to "improv[e] the trader, not the functioning of the computer." *Trading Techs. Int'l, Inc. v. IBG LLC*, 921 F.3d 1378, 1383 (Fed. Cir. 2019). For example, both patents disclose "[a] method and system for reducing the time it takes for a *trader* to place a trade when electronically trading on an exchange, thus increasing the likelihood that the *trader* will have orders filled at desirable prices and

quantities." (Dkt. 1120 at Ex. S, Ex. U) (emphasis added). Similarly, the patents explain that the invention "allows the *trader* to trade quickly and efficiently" and that "[t]rends in the trading of the commodity and other relevant characteristics are more easily identifiable by the *user* through the use of the present invention." (*Id*.) (emphasis added). Because the claims of both patents "are focused on providing information to traders in a way that helps them process information more quickly, not on improving computers or technology[,]" they are directed towards the abstract idea of placing orders on an electronic exchange. *Trading Techs.*, 921 F.3d at 1383.

TT argues that as the *CQG* court found with respect to the '132 and '304 Patents, the '411 and '996 Patents are patent eligible because they solve the missing-the-intended-price problem. While the '411 and '996 Patents are continuations of the '132 and '304 Patents and share a common specification, the specific claims of the '132 and '304 Patents are narrower in that they recite a truly static price axis. *Trading Techs. Int'l, Inc. v. IBG LLC*, 921 F.3d 1084, 1095 (Fed. Cir. 2019) ("Eligibility depends on what is claimed, not all that is disclosed in the specification."). It is not clear, and TT does not explain, how the '411 and '996 Patents, which include price axes that automatically move, solve the missing-the-price problem. *See IBG LLC v. Trading Techs. Int'l, Inc.*, No. CBM2016-00054, 2017 WL 4708078, at *15 (P.T.A.B. Oct. 17, 2017), *affd Trading Techs. Int'l, Inc. v. IBG LLC*, 767 F. App'x 1006, 1007 (Fed. Cir. 2019) (rejecting *CQG* as persuasive authority on the basis that '132 and '304 Patents recited narrower claims than the related patent at issue which "d[id] not recite the static price axis feature…."). Moreover, even the *CQG* court noted that the '132 and '304 Patents presented a "close question[ ] of eligibility…." *CQG*, 675 F. App'x at 1006. Thus, the Court is not inclined to extend the reasoning of *CQG*, a nonprecedential opinion, to related patents that do not share the same claim limitations (a static price axis).

TT also cites another nonprecedential decision, *IBG LLC v. Trading Techs. Int'l, Inc.*, 757 F. App'x 1004, 1006 (Fed. Cir. 2019), in which the Federal Circuit found that the '411 and '996 patents did not qualify for Covered Business Method ("CBM") review because they recited technological inventions. *IBG*, however, did not concern § 101 eligibility. *Id*. While the inquiries under CBM review and § 101 eligibility are related, the *IBG* court's decision does not dictate a finding of § 101 eligibility here.

The Court is hesitant to rely on *IBG* to support a finding of § 101 eligibility particularly in light of subsequent Federal Circuit decisions finding related TT patents ineligible under § 101. TT' '768 and '382 Patents are continuations of the '132 Patent and share the same specification as the patents in suit. (Dkt. 1537 at ¶¶ 56, 63) (*Id*. at Ex. 7, Ex. 74). Like the '411 and '996 Patents, they recite steps of receiving and dynamically displaying market information along a price axis that is not required to remain static. (Dkt. 1401 at Ex. 7, Ex. 74). After the *IBG* decision, the Federal Circuit held that the '768 and '382 Patents were patent ineligible because they "focus on improving the trader, not the functioning of the computer." *Trading Techs.*, 767 F. App'x at 1007; *Trading Techs. Int'l, Inc. v. IBG LLC*, 771 F. App'x 493 (Fed. Cir. 2019). Thus, although *IBG* found that the '411 and '996 Patents recited technological innovations for purposes of CBM review, the Federal Circuit's subsequent decisions regarding nearly identical patent claims support a finding of § 101 ineligibility for the '411 and '996 Patents.

B. *Alice* Step Two: Innovative Concept

As the '411 and '996 Patents are directed to the abstract idea of placing orders on an electronic exchange, the Court must also consider whether the elements of the representative claims, individually and as an ordered combination, recite an innovative concept. The representative claims of the '411 and '996 Patents recite steps of (1) receiving information, (2)

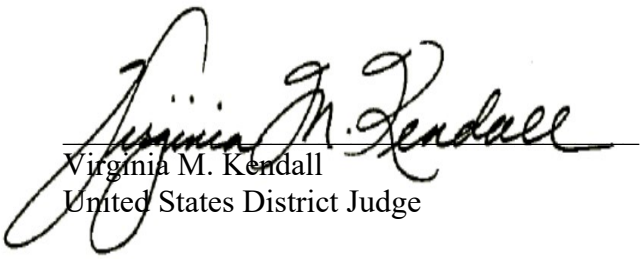
dynamically displaying such information along a price axis on a GUI, and (3) displaying an order entry region through which traders can place orders with a single action by the trader.

The mere receipt of information is not innovative. Here, the patents disclose that "[i]rrespective of what interface a trader uses to enter orders in the market, each market supplies and requires the same information to and from every trader." (Dkt. 1120 at Ex. S, Ex. U). Displaying and plotting information available to all is no more inventive. *See Elec. Power*, 830 F.3d at 1353. This is particularly so, where "the system of the present invention can be implemented on any existing or future terminal or device" and "[t]he physical mapping of … information to a screen grid can be done by any technique known to those skilled in the art" of trading. (Dkt. 1120 at Ex. S, Ex. U). Finally, as Figure 2 discloses, a one-click order entry region on a GUI already existed at the time of the claimed invention. (*Id*.)

Considering the claim elements together, it is clear by comparing the prior art in Figure 2 and the claimed invention in Figure 3, that the invention merely claims a rearrangement of market information known to be displayed in a different format. (*Id*.) While this rearrangement has benefits over the prior art, the rearrangement is not innovative in that it solves a technical problem. *Cf. CQG*, 2015 WL 774655, at *5, *affd CGQ*, 675 Fed. App'x at 1004 ("[A]t least the 'static price axis' element of the ['132 and '304] patents in suit [i]s an 'inventive concept', which eliminated some problems of prior GUIs relating to speed, accuracy, and usability…."). It is innovative in the sense that it helps traders place trades more quickly and efficiently. (*See* Dkt. 1120 at Ex. S, Ex. U). An analysis of the elements of the representative claims confirms that the subject matter of the '411 and '996 Patents is ineligible under § 101. For that reason, IBG's motion for summary judgment is granted.

CONCLUSION

For the foregoing reasons, TT's Motion for Summary Judgment that the Claims of the Patents-in-Suit are Patent-Eligible [1359] is granted in part and denied in part. IBG's Motion for Summary Judgment of Unpatentability of U.S. Patent Nos. 7,676,411 and 7,813,996 [1387] is granted.



Virginia M. Kendall
United States District Judge

Date: June 17, 2021